REMARKS

Applicants have studied the Office Action dated September 22, 2004. It is submitted that the application, as amended, is in condition for allowance. Claims 1, 3-13, 15, 17, 19-22, 24-25, and 27-30 are pending. Claims 1, 3, 4, 10, 15, 22, 24, and 25 have been amended. Claims 23 and 26 have been cancelled. Claims 27-30 have been added. Reconsideration and allowance of the pending claims in view of the above amendments and the following remarks is respectfully requested.

In the Office Action, the Examiner:

(1) Noted that claims could be restricted;

(2) Objected to claim 4 under 37 CFR 1.75 to be a duplicate of claim 3;

(3-4) Rejected claims 1, 3, 4, 6, 8, 9, 15, 17, 19, 20, 24, and 25 under 35 U.S.C .§ 102(b) as being anticipated by Koretsky et al (U.S. Patent No. 5,368,054);

(5-8) Rejected claims 5, 7, 23, and 26 under 35 U.S.C. § 103(a) as being unpatentable over Koretsky et al (U.S. Patent No. 5,368,054) in view of Yoshitani et al. (U.S. Patent No. 5,975,098);

(9) Rejected claim 10 under 35 U.S.C. § 103(a) as being unpatentable over Koretsky et al (U.S. Patent No. 5,368,054) in view of Yoshitani et al. (U.S. Patent No. 5,975,098) and in further view of Thrasher et al. (U.S. Patent No. 5,745,946);

(10) Rejected claims 11, 13, 21, and 22 under 35 U.S.C. § 103(a) as being unpatentable over Koretsky et al (U.S. Patent No. 5,368,054) in view of Busnaina (US2001/0013355); and

(11) Rejected claim 12 under 35 U.S.C. § 103(a) as being unpatentable over Koretsky et al (U.S. Patent No. 5,368,054) in view of Yoshitani et al. (U.S. Patent No. 5,975,098) in view Thrasher et al. (U.S. Patent No. 5,745,946), and further in view of Busnaina (US2001/0013355).

(2) Objection to claim 4 under 37 CFR 1.75

As noted above, the Examiner objected to claim 4 under 37 CFR 1.75 as being a duplicate of claim 3. Accordingly, claims 3 and 4 have been amended to now cover different limitations of the present invention. It is therefore believed that claims 3 and 4

are now in condition for allowance.

(3-4) Rejection under 35 U.S.C. § 102(b) Koretsky et al.

As noted above, the Examiner rejected claims 1, 3, 4, 6, 8, 9, 15, 17, 19, 20, 24, and 25 under 35 U.S.C § 102(b) as being anticipated by Koretsky et al. (U.S. Patent No. 5,368,054). Independent claims 1, and 15 have been amended to distinguish and to more clearly define the present invention over Koretsky et al. Support for the changes is found on page 5, lines 13-18 and page 8, line 1 to page 9, line 17 in the specification as originally filed. No new matter has been added.

Before discussing the prior art in detail, it is believed that a brief review of the invention as claimed, would be helpful. Independent claim 1 recites, *inter alia*:

> ... placing an object to be cleaned on a conveyor comprising at least two belts, wherein the object includes a front surface, a back surface, a first lateral edge and a second lateral edge, so that a first of the two belts is in frictional contact with a portion of the front surface of the object and a second of the two belts is in frictional contact with a portion of the back surface of the object while simultaneously exposing at least a portion of the first lateral edge and the second lateral edge for cleaning...

The Koretsky et al reference discloses a semiconductor wafer cleaning apparatus, for removing debris from a surface of a semiconductor wafer as the wafer is rotated about a prescribed cleaning plane (see FIG. 1 and col. 2, lines 27-30 of Koretsky et al.). Koretsky et al. place the wafer in a housing, where it is rotated under a focused jet stream of cleaning liquid (see FIG. 1 and col. 2, lines 36-45 of Koretsky et al.).

The Examiner cites 35 U.S.C. § 102(b) and a proper rejection requires that a single reference teach (i.e., identically describe) each and every element of the rejected claims as being anticipated by Koretsky et al.[1] By virtue of this amendment,

[1] See MPEP §2131 (Emphasis Added) "A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628,

independent claim 15 has been amended to contain the same limitations of independent claim 1. Because the elements in independent claims 1 and 15 (at least "a conveyer comprising at least two belts") of the instant application is not taught or disclosed by Koretsky et al., the apparatus of Koretsky et al. does not anticipate the present invention. The dependent claims are believed to be patentable as well because they all are ultimately dependent on either claim 1 or claim 15. Accordingly, the present invention distinguishes over Koretsky et al. for at least this reason. The Applicants respectfully submitted that the Examiner's rejection under 35 U.S.C. § 102(b) has been overcome.

(5-8) Rejection under 35 U.S.C. §103(a) Koretsky et al. and Yoshitani et al.

As noted above, the Examiner rejected claims 5, 7, 23, and 26 under 35 U.S.C. § 103(a) as being unpatentable over Koretsky et al. (U.S. Patent No. 5,368,054) in view of Yoshitani et al. (U.S. Patent No. 5,975,098).[2]

Dependent claim 23 has been cancelled and its limitations added to independent claim 15 to distinguish and to more clearly define the present invention over Koretsky et al. (U.S. Patent No. 5,368,054) in view of Yoshitani et al. (U.S. Patent No. 5,975,098). No new matter has been added. Independent claim 26 has been cancelled.

Before discussing the prior art in detail, it is believed that a brief review of the invention as claimed, would be helpful. Independent claim 1 recites, *inter alia*:

> ... placing an object to be cleaned on a conveyor comprising at least two belts, wherein the object includes a front surface, a back surface, a first lateral edge and a second lateral edge, so that a first of the two belts is in frictional contact with a portion of the front surface of the object and a second of the two belts is in frictional contact with a portion of the back surface of the object while simultaneously exposing at least a portion of the first lateral edge and the second lateral edge for cleaning...

631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). "The identical invention must be shown in as complete detail as is contained in the ... claim."

[2] Applicants make no statement whether such combination is even proper.

As noted above in the section entitled "(3-4) rejection under 35 U.S.C. § 102(b), the Koretsky et al. reference does not disclose a conveyer. The Yoshitani et al. reference discloses a substrate rinsing apparatus of a non-contact type. Additionally, Yoshitani et al. disclose a flat substrate (1) held in place by a chuck comprising two cross-shaped arms (2) (col 7, lines 43-44 of Yoshitani et al.). A rinsing nozzle (10) injects rinsing liquid as a curtain onto the substrate (1) (col. 15, lines 41-43 of Yoshitani et al.).

The Federal Circuit has consistently held that when a §103 rejection is based upon a modification of a reference that destroys the intent, purpose or function of the invention disclosed in the reference, such a proposed modification is not proper and the *prima facie* case of obviousness can not be properly made. See In re Gordon, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984). Here the intent, purpose and function of Yoshitani et al. is the use of an ultrasonic rinsing nozzle 10 with an elongated slot 13 that produces a curtain of liquid "F" onto an exposed side of substrate material (1). Yoshitani et al. are completely silent on a placing an object to be cleaned on a conveyor comprising at least two belts. The present invention provides a cleaning solution to very small thin objects that could not be properly held In the arms of Yoshitani et al.

Neither the flat substrate plane of Yoshitani et al. nor the closed chamber of Koretsky et al. can meet the intent and purpose of the present invention of "placing an object to be cleaned on a conveyor comprising at least two belts...so that a first of the two belts is in frictional contact with a portion of the front surface of the object and a second of the two belts is in frictional contact with a portion of the back surface of the object while simultaneously exposing at least a portion of the first lateral edge and the second lateral edge for cleaning." Not only does the present invention provide such high power insonifing but it also provides a secure transport system for moving sometimes very small and thin objects through the cleansing stream. This combination, as suggested by the Examiner, destroys the intent and purpose of Yoshitani's use cross-shaped arms and the use of Koretsky's closed rotational chamber. Accordingly, the present invention is distinguishable over Yoshitani et al. and Koretsky et al.

Continuing further, when there is no suggestion or teaching in the prior art for, *inter alia*,

Continuing further, when there is no suggestion or teaching in the prior art for, *inter alia*, "placing an object to be cleaned on a conveyor comprising at least two belts," the suggestion can not come from the Applicant's own specification. The Federal Circuit has repeatedly warned against using the Applicant's disclosure as a blueprint to reconstruct the claimed invention out of isolated teachings of the prior art. See MPEP §2143 and Grain Processing Corp. v. American Maize-Products, 840 F.2d 902, 907, 5 USPQ2d 1788 1792 (Fed. Cir. 1988) and In re Fitch, 972 F.2d 160, 12 USPQ2d 1780, 1783-84 (Fed. Cir. 1992). The prior art references Koretsky et al. and Yoshitani et al. does not even suggest, teach nor mention placing an object to be cleaned on a conveyor comprising at least two belts. Furthermore, **the Examiner correctly states** in item 9 of the instant Office Action, **that "Koretsky et al. modified by Yoshitani et al. do not specifically teach the use of a conveyor belt."**

For the foregoing reasons, independent claim 1, as amended, distinguishes over Yoshitani et al. and Koretsky et al. Claims 5 and 7 depend from claim 1. Since dependent claims contain all the limitations of the independent claims, claims 5 and 7 distinguish over Yoshitani et al. and Koretsky et al. as well, and the Examiner's rejection should be withdrawn.

(9) Rejection under 35 U.S.C. § 103(a) Koretsky et al.
in view of Yoshitani et al. and further in view of Thrasher et al.

As noted above, the Examiner rejected claim 10 under 35 U.S.C. § 103(a) as being unpatentable over Koretsky et al. (U.S. Patent No. 5,368,054) in view of Yoshitani et al. (U.S. Patent No. 5,975,098), and further in view of Thrasher et al. (U.S. Patent No. 5,745,946).

The Examiner correctly states on page 5 of the Office Action "Koresky et al. modified by Yoshitani et al. do not specifically teach the use of a conveyor belt" and goes on to combine Koresky et al., Yoshitani et al., and Thrasher et al.[3]

[3] Applicants make no statement whether such combination is even proper.

Thrasher et al. disclose a transport mechanism (600) for wafers that includes plurality of rollers (601) coupled by a **single** belt which turns all the rollers (col. 14, lines 51-55 of Thrasher et al.).

The Statute expressly requires that obviousness or non-obviousness be determined for the claimed subject matter "as a whole," and the key to proper determination of the differences between the prior art and the present invention is giving full recognition to the invention "as a whole." The Koretsky et al. and Yoshitani et al. references, taken alone or in view of Thrasher et al., simply do not suggest, teach or disclose the patentably distinct limitation of:

> ... placing an object to be cleaned on a conveyor comprising at least **two** belts, wherein the object includes a front surface, a back surface, a first lateral edge and a second lateral edge, so that a first of the two belts is in frictional contact with a portion of the front surface of the object and a second of the two belts is in frictional contact with a portion of the back surface of the object while simultaneously exposing at least a portion of the first lateral edge and the second lateral edge for cleaning... (emphasis added)

The limitations taken "as a whole" in independent claim 1 is not present in Koretsky et al. in view of Yoshitani et al. and further in view of Thrasher et al.

Very recently, the Federal Circuit again took up the identical question of Obviousness in combining references in the case In re Sang Su Lee, No. 00-1158 (January 18, 2002). In this case, the Board of Patent Appeals rejected all of Applicant's pending claims as obvious under § 103. The Federal Circuit vacated and remanded. Citing two prior art references, the Board stated that a person of ordinary skill in the art would have been motivated to combine the references based on "common knowledge" and "common sense," but it did not present any specific source or evidence in the art that would have otherwise suggested the combination. Here the Examiner on page 5 is citing "*it would have been obvious to an artisan at the time the invention was made to use a belt conveyor for it's conventional purpose in the method of Yoshitani*" without more.[3] The

[3] If, however, the Examiner's statements are based on facts within the personal knowledge of the Examiner, the Applicants respectfully request that the Examiner

conveyor for it's conventional purpose in the method of Yoshitani" without more.[4] The Federal Circuit held that the Board's rejection of a need for any specific hint or suggestion in the art to combine the references was both legal error and arbitrary agency action subject to being set aside by the court under the Administrative Procedure Act (APA). Accordingly, without any suggestion or motivation found in Yoshitani et al. in view of Thrasher, the Examiner has failed to properly establish a prima facie case of obviousness of the invention as a "whole." The Applicants submit the present invention distinguishes over Yoshitani et al. in view of Thrasher for at least this reason as well.

If references taken in combination would produce a "seemingly inoperative device," such references teach away from the combination and thus cannot serve as predicates for a prima facie case of obviousness. In re Sponnoble, 405 F.2d 578, 587, 160 USPQ 237, 244 (CCPA 1969); see also In re Gordon, 733 F.2d 900, 902, 221 USPQ 1125, 1127 (Fed. Cir. 1984) (inoperable modification teaches away). The present invention uses two belts to secure and move objects, which are sometimes very small and thin. Introducing the objects to a stream of high-pressure cleaning liquid on the single conveyor belt of Thrasher would result in the objects being projected off of the **single** conveyor surface and lost, destroyed, or damaged.

For the foregoing reasons, independent claim 1 as amended distinguishes over Koretsky et al. in view of Yoshitani et al. and further in view of Thrasher et al. Claim 10 depends from claim 1 and since dependent claims contain all the limitations of the independent claims, claim 10 distinguishes over Koretsky et al. in view of Yoshitani et al. and further in view of Thrasher et al., as well, and the Examiner's rejection should be withdrawn.

(10) Rejection under 35 U.S.C. § 103(a) Koretsky et al. in view of Busnaina

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[4] If, however, the Examiner's statements are based on facts within the personal knowledge of the Examiner, the Applicants respectfully request that the Examiner support these references by filing an affidavit as is allowed under MPEP §707 citing 37 CFR 1.104(d)(2).

As noted above, the Examiner rejected claims 11, 13, 21, and 22 under 35 U.S.C. § 103(a) as being unpatentable over Koretsky et al. (U.S. Patent No. 5,368,054) in view of Busnaina (US2001/0013355)[5].

The Statute expressly requires that obviousness or non-obviousness be determined for the claimed subject matter "as a whole," and the key to proper determination of the differences between the prior art and the present invention is giving full recognition to the invention "as a whole." The Koretsky et al. reference, taken alone or in view of and Busnaina, simply does not suggest, teach or disclose the patentably distinct limitation of:

> ... placing an object to be cleaned on a conveyor comprising at least two belts, wherein the object includes a front surface, a back surface, a first lateral edge and a second lateral edge, so that a first of the two belts is in frictional contact with a portion of the front surface of the object and a second of the two belts is in frictional contact with a portion of the back surface of the object while simultaneously exposing at least a portion of the first lateral edge and the second lateral edge for cleaning...

The limitations taken "as a whole" in independent claims 1 and 15 are not present in Koretsky et al. taken alone and/or in view of Busnaina.

If references taken in combination would produce a "seemingly inoperative device," such references teach away from the combination and thus cannot serve as predicates for a prima facie case of obviousness. In re Sponnoble, 405 F.2d 578, 587, 160 USPQ 237, 244 (CCPA 1969); see also In re Gordon, 733 F.2d 900, 902, 221 USPQ 1125, 1127 (Fed. Cir. 1984) (inoperable modification teaches away).

For the foregoing reasons, Independent claims 1 and 15, as amended, distinguishes over Koretsky et al. taken alone and/or in view of Busnaina. Claims 11 and 13 depend from claim 1 and claims 21 and 22 depend from claim 15. Since dependent claims contain all the limitations of the independent claims, claims 11, 13, 21 and 22

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[5] Applicants make no statement whether such combination is even proper.

distinguishe over Koretsky et al. in view of Busnaina, as well, and the Examiner's rejection should be withdrawn.

(11) Rejection under 35 U.S.C. § 103(a) Koretsky et al. in view of Yoshitani et al. and further in view of Thrasher et al. and further in view of Busnaina

As noted above, the Examiner rejected claim 12 under 35 U.S.C. § 103(a) as being unpatentable over Koretsky et al. (U.S. Patent No. 5,368,054) in view of Yoshitani et al. (U.S. Patent No. 5,975,098), and further in view of Thrasher et al. (U.S. Patent No. 5,745,946), and further in view of Busnaina (US2001/0013355).[6]

The Statute expressly requires that obviousness or non-obviousness be determined for the claimed subject matter "as a whole," and the key to proper determination of the differences between the prior art and the present invention is giving full recognition to the invention "as a whole." The Koretsky et al. reference taken alone or in view of Yoshitani et al. and further in view of Thrasher et al. and further in view of Busnaina simply do not suggest, teach or disclose the patentably distinct limitation of:

> ... placing an object to be cleaned on a conveyor comprising at least two belts, wherein the object includes a front surface, a back surface, a first lateral edge and a second lateral edge, so that a first of the two belts is in frictional contact with a portion of the front surface of the object and a second of the two belts is in frictional contact with a portion of the back surface of the object while simultaneously exposing at least a portion of the first lateral edge and the second lateral edge for cleaning...

The limitations taken "as a whole" in independent claim 1 is not present in Koretsky et al. in view of Yoshitani et al., and further in view of Thrasher et al., and further in view of Busnaina.

If references taken in combination would produce a "seemingly inoperative device," such references teach away from the combination and thus cannot serve as predicates

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[6] Applicants make no statement whether such combination is even proper.

for a prima facie case of obviousness. In re Sponnoble, 405 F.2d 578, 587, 160 USPQ 237, 244 (CCPA 1969); see also In re Gordon, 733 F.2d 900, 902, 221 USPQ 1125, 1127 (Fed. Cir. 1984) (inoperable modification teaches away).

It is accordingly believed to be clear that, independent claim 1, as amended, distinguishes over Koretsky et al. in view of Yoshitani et al., and further in view of Thrasher et al., and further in view of Busnaina. Claim 12 depends from claim 1 and since dependent claims contain all the limitations of the independent claims, claim 12 distinguishes over Koretsky et al. in view of Yoshitani et al., and further in view of Thrasher et al., and further in view of Busnaina., as well, and the Examiner's rejection should be withdrawn.

CONCLUSION

The remaining cited references have been reviewed and are not believed to affect the patentability of the claims as amended.

In this Response, Applicants have amended certain claims. In light of the Office Action, Applicants believe these amendments serve a useful clarification purpose, and are desirable for clarification purposes, independent of patentability. Accordingly, Applicants respectfully submit that the claim amendments do not limit the range of any permissible equivalents.

Applicants acknowledge the continuing duty of candor and good faith to disclosure of information known to be material to the examination of this application. In accordance with 37 CFR §1.56, all such information is dutifully made of record. The foreseeable equivalents of any territory surrendered by amendment are limited to the territory taught by the information of record. No other territory afforded by the doctrine of equivalents is knowingly surrendered and everything else is unforeseeable at the time of this amendment by the Applicants and their attorneys.

Applicants respectfully submit that all of the grounds for rejection stated in the Examiner's Office Action have been overcome, and that all claims in the application are

allowable. No new matter has been added. It is believed that the application is now in condition for allowance, which allowance is respectfully requested.

It is believed that no fee is due with this Amendment. However, if any fees are due, the Commissioner is hereby authorized to charge any fees that may be required or credit any overpayment to Deposit Account 50-0510.

PLEASE CALL the undersigned if that would expedite the prosecution of this application.

Respectfully submitted,

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